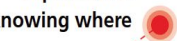




Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

**Bundesamt für Landestopografie swisstopo**  
Koordination, Geo-Information und Services KOGIS

wissen wohin  
savoir où  
sapere dove  
knowing where



# The Linked Data Service of the Swiss Federal Spatial Data Infrastructure

SDI.Next: Linked Spatial Data in Europe – March 12<sup>th</sup>, 2019, Amersfoort, The Netherlands

Pasquale Di Donato, swisstopo/COGIS



# swisstopo

- Federal Office of Topography of Switzerland
- Legal mandate for developing, coordinating, and operating the Federal Spatial Data Infrastructure
  - Geoinformation Act on October 5<sup>th</sup> 2007
- COSIG (Coordination, Geoinformation and Services) is a swisstopo division responsible for coordinating activities in the areas of geoinformation and geoinformation systems at federal level



# Linked Data activities

- Project was started in July 2016
- Test dataset: Administrative Units → requirement: versioning
- Intended audience: non GI experts → improve discoverability, reuse vocabularies, WGS84 as CRS
- Objectives: build (intern) awareness, build knowledge



# FSDI Linked Data Service

- The system was released on March 2017
- Components:
  - SPARQL Endpoint: <https://sparql.geo.admin.ch/sparql>
  - SPARQL-Client: <https://ld.geo.admin.ch/sparql/>
  - Search: <https://ld.geo.admin.ch/search>
- Data:
  - Administrative Units 2016 → 2019
  - Public transport stops



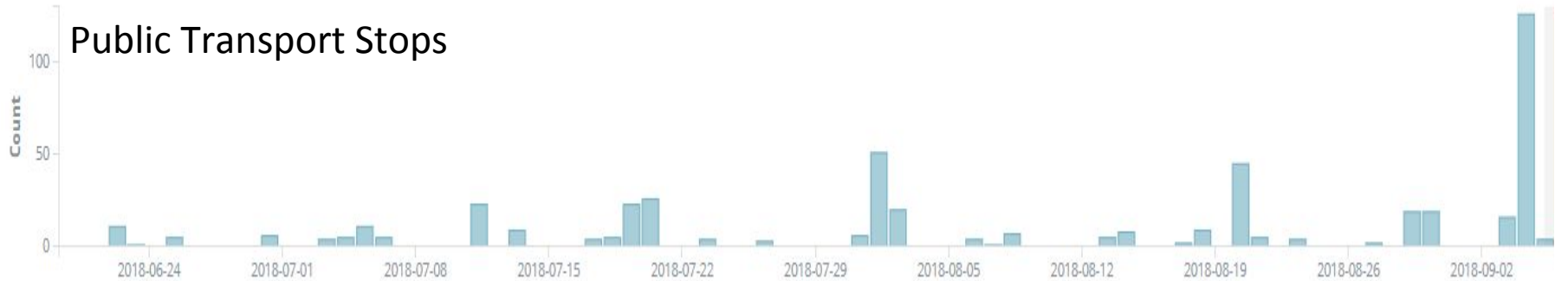
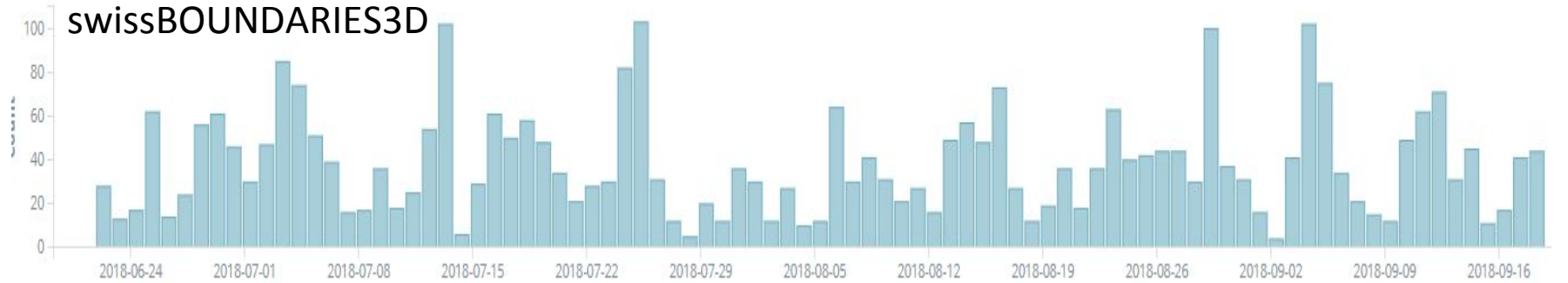


# FSDI Linked Data Service

- *Best Practice 15: Reuse vocabularies, preferably standardized ones* (Data on the Web Best Practice)
  - GeoSPARQL, W3C Geo Vocabulary, schema.org, GeoNames, Dublin Core, Wikidata, Dbpedia, GTFS, qudt.org
- But ... we are missing a generic, lightweight, agile “governmental vocabulary”
- Tools: ogr2ogr + Tarql



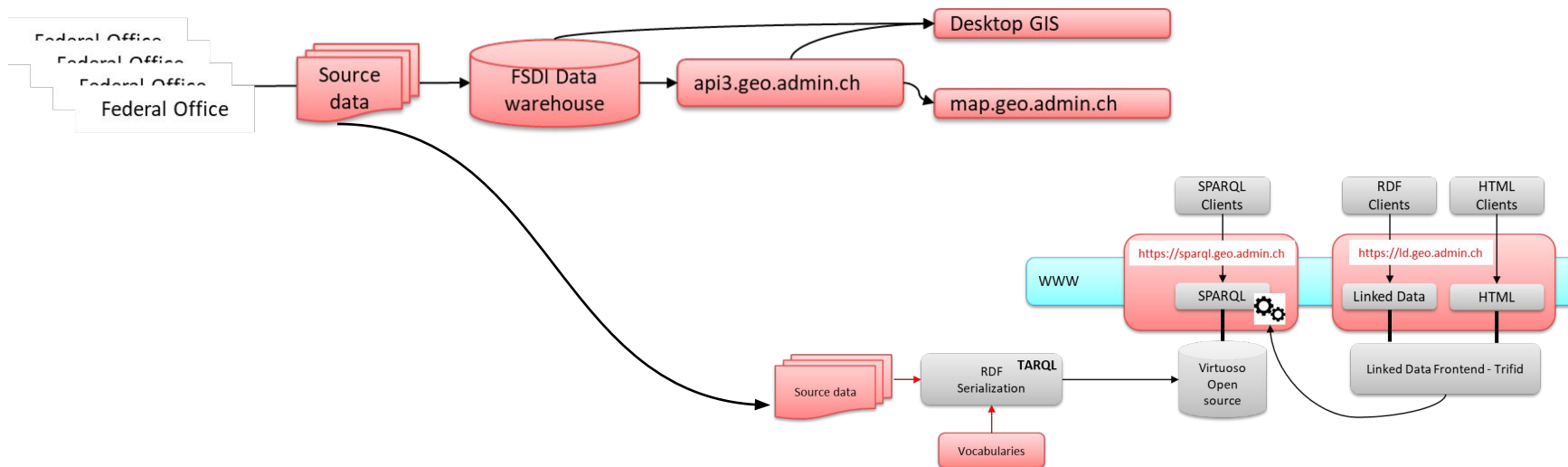
# FSDI Linked Data Service





# FSDI Linked Data Service: cons

- Parallel/redundant data integration and publication process
- Redundant data storage
- Not very efficient in terms of maintenance
- Inefficient in case of “dynamic data”

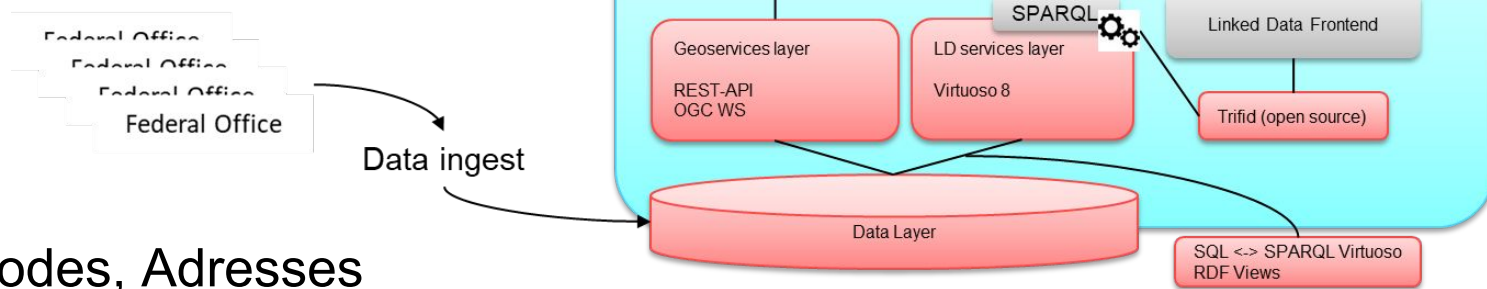






# FSDI Linked Data Platform: Reloaded

- Synchronize publication
- Avoid data redundancy
- Virtuoso 8 (commercial edition):
  - RDF Views
  - GeoSPARQL Support



- Post Codes, Adresses



# Grazie per l'attenzione!

- Contact Info
  - [GeoAdmin Forum](#)
  - `pasquale.didonato(at)swisstopo.ch`
- Linked Data Service
  - [www.geo.admin.ch/linkeddata](http://www.geo.admin.ch/linkeddata)